Fire-Bottle Follies

By AE2(AW/SW) Stephanie Teixeira

One evening during deployment, pilots were manning up for the first night launch. As a troubleshooter with VFA-136, I was making my way to the back of the jet to check hydraulic gauge No. 1 on the left side of the aircraft, while one of our pilots climbed into the cockpit. The night was ready to heat up.

As I was writing down the numbers on the launch card, the pilot started the APU. Normally, when the APU starts at night, you can see some orange flames coming from the exhaust. However, this time, the flames kept growing bigger and wider. They started hitting the deck and flowing out the sides of the aircraft. I was worried because the flames were larger than I ever had seen before, so I gave the PC the fire signal with my wand. The PC was confused at first but eventually gave the pilot the shutdown signal. The APU spooled down, and the fire went out.

I had been watching the PC and knew that he did not pass the correct signal for an APU fire. So, to clarify the situation, I ran up to the starboard side of the jet and yelled to the pilot, "You had an APU fire." In the meantime, our flight-deck chief and another troubleshooter already had started to pump up the APU. To make sure we didn't have any mixed signals, I crossed to the port side of the FA-18C, climbed up the ladder, and told the pilot what had happened. I could have just plugged into the aircraft to pass that information; however, that would have taken too long. I told him to wait for us to pump up the APU, so we could try the start again. He acknowledged what I told him by saying "OK," so I climbed down from the LEX to help the other troubleshooter with the APU.

Once we were ready to start again, we gave the PC the signal to start the APU, and the pilot started the jet without incident. After final checks, the flight-deck crew broke down the jet and taxied it toward the catapults. A few minutes later, the pilot called himself down and taxied back for shutdown. What the heck had happened now?

Navy photo by PH1(AW) Brien Aho

It turned out the jet was down before it was started the second time. The pilot noticed during the first start that his jet was getting a lot of attention on the flight deck. He looked at his PC, who was a new trainee, giving him a signal with the light wands. The pilot became confused because the signal appeared to be a cross between the start and shut-down-engine signals. In the background, the pilot thought he saw the PC instructor standing behind the PC trainee give a fire signal without wands. Based on the conflicting signals and confusion, the pilot decided it was best to shut off the APU. The pilot was anxious because he did not understand what was going on. When he saw me mouth the word "fire" from the right side of the jet, he decided to execute the first steps of the APU fire-emergency procedure, which was to blow the fire-extinguisher bottle. However, since things seemed to have calmed down around his aircraft, he never completed the procedure, which called for him to exit the aircraft. No one on the deck and around the aircraft knew that the pilot's emergency procedures were to blow the fire bottle. Had we known, or had the pilot climbed out of the jet, we would have suspected that the jet was down.

The pilot assumed we knew that he had fired the extinguisher, but we had no idea. In fact, the troubleshooter in the wheel well pumping up the APU noticed a hissing sound and had mist spray into his face, but he didn't think it was the fire-extinguishing agent from the bottle. Since no one had heard the CADS fire, no one thought of checking the fire bottle or asking the pilot if he had blown the extinguisher. Had the troubleshooters checked the MMP codes before the chocks and chains had been removed for taxi, we would have seen a 988 code, indicating that the fire bottle had been discharged. We instantly would have known that the jet was down.

When I talked to the pilot after I climbed up the ladder, he did not mention the extinguisher because he thought I already knew. Thinking that we needed the jet turning to troubleshoot, he restarted it. Only later, as he taxied toward the catapult, did the CATCC representative confirm he was down.

In the end, we learned many lessons from this experience. Everyone must play an active role and communicate clearly and concisely with each other. A PC trainee must have better supervision with a new pilot. PC instructors need to take charge and pass proper signals if their trainee doesn't handle a situation correctly. They also should have their own set of wands. PC trainees must know their emergency signals. It's important that all maintainers know emergency procedures. In our case, only maintainers with a low-power turn qual knew the pilots' APU fire procedures. Implementing training like this will keep the ground crew from trying to restart the APU after a fire-bottle discharge.

Regardless of what is going on, procedures must be followed. Because of the fire, the ground crew got behind and felt rushed trying to launch the jet before the catapults were secured. As a result, we forgot to check the MMPs. Had we stopped for a second and reviewed our procedures, this situation wouldn't have happened.

Even though each of us thought we knew what was going on, none of us knew all that had happened until well after the incident. Fortunately, the extinguishing agent did not harm the troubleshooter, and the jet did not go flying in a down status. We shouldn't depend on luck, but we were lucky that this incident cost us only a sortie.

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